

conspicuously marked with darker brown; scutellum and postnotum light brown, the posterior margin of the latter darker. Thorax with very short setæ. Pleura grey, variegated with brown, especially on the ventral sclerites; dorso-pleural membrane obscure yellow. Halteres brown, the knobs obscure brownish yellow. Legs with the coxæ brown; trochanters greenish; femora yellowish brown, the tips rather narrowly but conspicuously blackened; tibiæ pale yellowish brown, the tips very narrowly blackened; basal tarsal segment bright brown, the terminal segments blackened. Wings strongly infumed, the caudal margin fading into grey; wing-base and cells *C* and *Sc* darker brown; stigma oval, dark brown; a conspicuous brown cloud on the basal deflection of R_{4+5} and $r-m$; a brown cloud in the centre of cell *R*; a very small pale area before the stigma; veins dark, the tips of the medial and anal veins subobsolete. Venation: cell 1st M_2 narrowed distally; petiole of cell M_1 a little less than twice the length of *m*; $m-cu$ distinct; cell 2nd *A* broad.

Abdominal tergite 1 and the lateral margins of 2 reddish yellow, the median area dark brown; remaining tergites shiny dark brown, the caudal margins of the segments narrowly blackened; hypopygium dark.

Hab. New Zealand (South Island).

Holotype, ♂, Dunedin, Otago, December 22, 1921 (*G. Howes*).

LX.—*Exotic* Muscaridæ (*Diptera*).—VIII.* By J. R. MALLOCH, Bureau of Biological Survey, Washington, D.C.

Subfamily PHAONINÆ.

Genus XENOSIA, Malloch.

I erected this genus for the reception of one species, *ungulata*, Stein. In my original definition of the genus, I included the presence of fine hairs on the upper margin of the hypopleura in front of the spiracle as one of the characters of the genus. This applies to the genotype, but not to *morosa*, Stein, which I consider may properly be located in this genus. This character, therefore, must be eliminated.

* For Part VII., see *Ann. & Mag. Nat. Hist.* (9) x., October 1922, pp. 379-391.

Xenosia ungulata (Stein).

One male, Pankullam, Ceylon, 13. iii. 1891 (*J. W. Yerbury*).

This specimen has a dense covering of mites on the ventral surface and on the sides of the thorax anteriorly and posteriorly.

Xenosia morosa (Stein).

A bluish-black species with greyish pruinescence on thorax and abdomen; the antennæ and palpi fuscous, and the legs yellow. The antennæ are long and rather slender, the third segment about four times as long as second, and the arista is much shorter-haired than in *ungulata*. The anterior intra-alar bristle is absent as in that species, the scutellum has some fine hairs on sides below, and the setulæ on first vein are confined to the basal half of the vein.

Three females, Nuwara Eliya, Ceylon, 6. v. 1891, and 12. and 13. vii. 1892 (*J. W. Yerbury*).

This species was originally described from Ceylon.

The genus *Micrographa*, Malloch, has the first vein setulose, but on the apical instead of the basal half, and the arista is pubescent, not plumose. I inadvertently cited the genotype as *intonsa*, Stein, instead of *tonsa*, Stein. There is no such species as *Linnophora intonsa*, Stein. This genus is more nearly related to *Linnophora* than to *Helina*.

Helina fuscoflava, Malloch.

One female, Victoria, Australia (*C. French*).

African *Cenosiniæ*.

This subfamily is very well represented in Africa both as to genera and species. The adults are, so far as I know, predacious, feeding upon small insects of other orders and Diptera, especially small Nematocera. The larvæ of some species feed in much decayed wood, especially tree-stumps, and others feed in rotting fruit. The genus *Atherigona*, which is cosmopolitan in its distribution, is very commonly found in Africa, but it is very difficult to identify the described species as they have been described on colour-characters almost entirely. I hope to give some time to the study of this genus next, and find some means of working out the forms available to me.

The subfamily, as at present understood, has the following

characters:—Eyes in both sexes widely separated; thorax usually with one pair of strong presutural dorso-central bristles, if with two pairs there are but three pairs of postsuturals, the lower stigmatal bristle is directed downward, and there is but one antero-dorsal bristle on middle of hind tibia; scutellum with at most four strong marginal bristles, the smaller preapical bristles absent; sixth wing-vein short; scutellum without any soft ventral hairs; lower calyptra larger than upper, sometimes inconspicuously so.

Key to Genera in Africa.

- | | | |
|--|-----|-------------------------------|
| 1. Thorax with two pairs of strong postsutural dorso-central bristles; lower calyptra but little larger than upper | 2. | |
| Thorax with three pairs of postsutural dorso-central bristles; lower calyptra usually much larger than upper..... | 4. | |
| 2. Costal vein ending at or slightly beyond apex of third vein; mid-tibia with a long bristle at base | | <i>Tenuicosta</i> , Stein. |
| Costal vein continued to apex of fourth vein | 3. | |
| 3. Scutellum with four strong bristles; fore tibiæ of males feathered | | <i>Anaphalantus</i> , Loew. |
| Scutellum with but two strong bristles; fore tibiæ of males not feathered | | <i>Microcalyptra</i> , Stein. |
| 4. Scutellum with but two strong bristles; fore tibiæ unarmed at middle..... | 5. | |
| Scutellum with four strong bristles | 6. | |
| 5. Hind tibia with one long and one short antero-ventral bristle; thorax with one pair of presutural dorso-central bristles.. | | <i>Orchisa</i> , Rondani. |
| Hind tibia with at most one short antero-dorsal bristle; thorax with two pairs of presutural dorso-central bristles..... | | <i>Spanocheta</i> , Stein. |
| 6. Costal vein ending at apex of third vein .. | | <i>Brevicosta</i> , Malloch. |
| Costal vein continued to apex of fourth vein | 7. | |
| 7. Anterior thoracic dorso-centrals very short, but little longer than the adjacent setulose hairs; fore femur with one or two bristles near apex on postero-ventral surface | | <i>Atherigona</i> , Rondani. |
| Anterior thoracic bristles long and strong, well differentiated from any minute setulæ that may be present; fore femur with a complete series of bristles on postero-ventral surface | 8. | |
| 8. Hind tibia with one or two strong bristles on postero-dorsal surface near middle .. | 9. | |
| Hind tibia without bristles on postero-dorsal surface near middle | 10. | |
| 9. Hind tibia with two bristles on postero- | | |

- dorsal surface; median two bristles on each orbit very close together. *Pygophora*, Schiner.
- Hind tibia with one median postero-dorsal bristle; bristling of orbits normal *Cænosiæ*, Meigen, pt.
10. Hind tibia with two very long bristles at middle, the bases of which are very close together, one on the antero-dorsal and the other on the anterior or antero-ventral surface. *Caricea*, Rob.-Desv.
- Hind tibia with one long strong bristle on antero-dorsal and a weaker bristle on the antero-ventral surface, the latter nearer apex than than the former *Cænosiæ*, Meigen, pt.
- Hind tibia with two antero-dorsal and two antero-ventral bristles near middle; lower calyptra hardly produced *Schænomyza*, Haliday.

Key to Species of Cænosiæ and Caricea.

1. Legs black; fore and mid coxæ whitish; antennæ pale yellow *albicoxa*, Stein.
- Legs black, at most the bases of tibiæ narrowly yellowish 2.
- Legs yellow; if largely black, the tibiæ are always yellow at least at bases, and the femora are usually basally, always so if the tibiæ are blackened apically. 14.
2. Halteres black or dark brown 3.
- Halteres yellow 7.
3. Arista distinctly short-haired on basal half; calyptræ whitish; antennæ black *nodosa*, Stein.
- Arista pubescent or bare 4.
4. Third antennal segment yellow; without a sharp upper anterior angle at apex; calyptræ whitish *canifrons*, Stein.
- Antennæ black 5.
5. Calyptræ whitish; antennæ with a pointed upper angle at tip; frons seen from in front with dense whitish pruinescence *præacuta*, Stein.
- Calyptræ brown or fuscous 6.
6. Frons seen from in front densely white pruinescent *niveifrons*, Stein.
- Frons seen from in front black or grey *fumisquamæ*, Stein.
7. Arista with short pubescence or nearly bare; calyptræ very unequal in size; frons densely whitish-grey pruinescent 8.
- Arista with distinct but not very long hairs; frons not densely whitish-grey pruinescent 9.
8. Abdomen with a dorso-central vitta and paired spots on dorsum black; legs black *planifrons*, Stein.
- Abdomen grey pruinescent, immaculate; knees yellow *diluta*, Stein.
9. Wings whitish on basal half, more or less conspicuously blackened on apical half;

- lower calyptra much protruded; abdomen greyish pruinose, opaque, with paired dorsal black spots 10.
 Wings unicolorous hyaline 11.
10. Paired black spots on dorsum of abdomen fused, large, and rather poorly defined; apical half of wing very conspicuously blackened; fifth sternite in male entirely opaque grey pruinose *semifumosa*, Stein.
 Paired black spots on dorsum of abdomen widely separated, sometimes indistinct; apical half of wing inconspicuously blackened; inner half of each process of fifth abdominal sternite of male shining, outer half opaque grey pruinose *semialba*, sp. n.
11. Lower calyptra barely protruded beyond upper; abdomen with grey pruinescence, and dorso-central vitta and paired spots black *fullax*, Stein.
 Lower calyptra protruded very much beyond upper 12.
12. Abdomen glossy black, with grey pruinescence on each tergite at the anterior lateral angle on dorsum, not with distinct paired spots 12 a.
 Abdomen opaque grey pruinose with paired spots and sometimes a central vitta on dorsum 13.
- 12a. Legs black; arista quite distinctly haired *pilifemur*, Stein.
 Knees and bases of tibiæ yellow; arista with short pubescence *fascigera*, Stein.
13. Bases of fore tibiæ narrowly pale yellowish; male without series of median spots on dorsum of abdomen; outer cross-vein of wing at not more than its own length from apex of fifth vein *semialba*, sp. n.
 Fore tibiæ black; male with a very distinct series of black spots on middle of dorsum of abdomen; outer cross-vein of wing at distinctly more than its own length from apex of fifth *tripunctiventris*, sp. n.
14. Arista with exceptionally long hairs, the longest about as long as length of third antennal segment 15.
 Arista short-haired or pubescent, the longest hairs never much more than as long as width of third antennal segment 16.
15. Femora yellow, sometimes a small blackish mark at apices of hind pair *longiseta*, Stein.
 Femora black *angustifrons*, Stein.
16. All femora black, sometimes yellowish at apices 17.
 At least some portion of basal half of femora yellowish 20.
17. Tarsi pale yellow *ochroprocta*, Spieser.
 Tarsi black 18.

18. Antennæ falling much short of lower margin of eyes *humilis*, Meigen.
 Antennæ extending at least to lower margin of eyes 19.
19. Hind tibiæ with fine setulæ on almost the entire ventral surface; thorax usually with a brown median vitta *trichocnema*, Stein.
 Hind tibiæ without fine setulose ventral hairs; thorax not vittate *inanis*, Stein.
20. Tibiæ largely black; wings slightly and evenly brownish *fumipennis*, Stein.
 Tibiæ yellow; wings hyaline 21.
21. Abdomen more or less translucent yellow at base *dorsalis*, v. Roser.
 Abdomen not yellowish at base 22.
22. Vibrissæ yellow *flavovibrissata*, Stein.
 Vibrissæ black 23.
23. Hind tibia in both sexes with a postero-dorsal bristle and an antero-dorsal bristle at middle, the female with an antero-ventral bristle also; arista almost bare; thorax with three broad brown vittæ, the median one carried over disc of scutellum 24.
 Hind tibia lacking the postero-sutural bristle 25.
24. Third antennal segment attenuated apically, gradually tapered to apex, the underside without a rounded angle, the upper terminating in a sharp point; dorsum of thorax chocolate-brown, that of abdomen similarly coloured except at anterior lateral angles of tergites where there are small grey-pruinose triangular marks; all femora with a blackish stripe above apically *attenuicornis*, sp. n.
 Third antennal segment normal, not distinctly tapered to apex; thorax not as above 24 a.
- 24a. Ocellar bristles about two-thirds as long as frons; bristles on basal half of antero-ventral and postero-ventral surfaces of mid-femur long and strong; all femora largely infuscated, pale at bases and apices *fuscifemur*, sp. n.
- Ocellar bristles about one-third as long as frons; bristles on basal half of postero-ventral and antero-ventral surfaces of mid-femur very short and weak; femora almost entirely clear rufous yellow *vittata*, Wiedemann.
25. Thorax with a very broad brown vitta on each side of disc which is carried over anterior lateral angle of scutellum, and a very fine median brown line which is neither contiguous with lateral vitta nor

- continued over disc of scutellum; anterior bristle on middle of hind tibia apical of the antero-dorsal one. *inæquivitta*, sp. n.
- Thorax with the vittæ not as above, the anterior lateral angles of scutellum never darker than the disc 26.
26. Cross-veins of wings slightly but distinctly infuscated; arista bare; small species, 3.5 mm. in length. *costata*, Stein.
- Cross-veins of wings not infuscated 27.
27. Third antennal segment pale yellow; small species, about 1.3 mm. in length 28.
- Third antennal segment not yellow 29.
28. Fore and mid tibiæ without bristles at middle *dorsalis*, v. Roser.
- Fore and mid tibiæ with the normal median bristles *longitarsis*, Stein.
29. Hind tibia with only the antero-dorsal bristle at middle *venia*, sp. n.
- Hind tibia with the usual two bristles at middle 30.
30. Large species, averaging over 5 mm. in length 31.
- Small species, not over 4 mm. in length 34.
31. Fore femora entirely yellow; arista short-haired *similis*, Stein.
- Fore femora partly blackened; arista distinctly pubescent 32.
32. Thorax indistinctly vittate laterally; third antennal segment much longer than distance from its apex to mouth-margin; anterior sterno-pleural bristle long and strong. *natalia*, sp. n.
- Thorax conspicuously vittate laterally; third antennal segment as long as distance from its apex to mouth-margin; anterior sterno-pleural bristle short and weak 33.
33. Hind tibia with the anterior bristle but slightly basad of the antero-dorsal one; fore femur with a black dorsal mark on apical third; median vitta not continued over scutellum. *atropicata*, sp. n.
- Hind tibia with the anterior bristle very distinctly basad of the antero-dorsal one; fore femur with a black streak on postero-dorsal surface from base to apex; median vitta continued over scutellum. *calopoda*, Bezzi.
34. Arista with its longest hairs about as long as width of third antennal segment; abdomen with distinct paired spots and median vitta on dorsum *punctigera*, Stein.
- Arista barely pubescent 35.
35. Mid and hind femora on antero-ventral surface on their entire length with long

- bristles and short and fine hairs; abdomen with distinct paired spots and median vitta on dorsum *strigulipes*, Stein*.
 Mid and hind femora with only sparse setulose hairs ventrally; abdomen without distinct dorsal markings *attenuata*, Stein.

Wherever the descriptions of the species have permitted me to do so I have included them in the key, but several African species are so poorly described that this has been found impossible. Those omitted are as follows:—*cyclophthalmia*, Thomson, *flavipes*, Adams, *inversa*, Wiedemann, *punctipes*, Thomson, *multimaculata*, Adams, *sex-notata*, Adams, and *trichopyga*, Loew.

Cænosiæ punctipes, Thomson.

This species belongs to the same group as *similis*, Stein, but from Stein's re-description I cannot place it satisfactorily, though it will run to *similis* in the key given here. It differs in having the femora all yellow.

Cænosiæ humeralis, Stein.

This specific name, *humeralis*, was preoccupied by *humeralis*, Wiedemann, when Stein used it for his species and the name *acromiata* was proposed to replace that of Stein's species by Speiser. Though the Wiedemann species has been removed to *Atherigona* and Stein's is a *Pygophora*, still the two were described as *Cænosiæ* species, and the name *acromiata*, Speiser, must take the place of *humeralis*, Stein, in *Pygophora*. I have several times referred to Stein's species under the specific name *humeralis*, having failed to note until recently that the name had been changed by Speiser.

With respect to preoccupied names, it may be well to note that the specific name *flavipes* has been used three times in this genus, the last time by Adams for an African species, a fact which will prevent the renaming of that species should it have been subsequently described under another name.

Caricæ fumisquama (Stein).

A deep black species, with fuscous calyptræ and halteres, infuscated wings, and the thorax and abdomen without markings. Arista pubescent; frons flat and appearing

* This is the species also listed under the name *cingulipes*, Zetterstedt, by Stein.

microscopically granulose; the orbital bristles three, long, but not strong. Anterior sterno-pleural short. Anterior median hind tibial bristle slightly basad of the antero-dorsal one, both basad of middle. Eyes covering almost the entire side of head.

Length 3 mm.

One female, Obuasi, Ashanti, 4. viii. 1907 (*W. M. Graham*).

Caricea pilifemur (Stein).

One pair *in copula* and one female, Ulundi, Natal, ix. 1896, 5000–6500 feet (*G. A. K. Marshall*).

A very distinctly shining black species, which is distinguished, as stated in the key, by the markings on the abdomen.

Caricea semifumosa (Stein).

A very striking species. Entirely black, densely grey-pruinose, the thorax not vittate, and the abdomen with the fuscous paired spots fused. Wings white on basal half, black on apical half. Median long bristles on hind tibia at same height; fore femur with a series of fine short antero-ventral bristles on basal two-thirds which are longest at base; anterior sterno-pleural bristle long; frons very narrow, not over one-fifth as wide as head at centre in male, the bristles fine and short; longest hairs on arista as long as width of third antennal segment.

Length 4 mm.

Four males, Willow Grange, Natal (*R. C. Wroughton*).

Caricea semialba, sp. n.

Male and female.—A larger species than the last and more robust, the wings of female not infuscated, and those of male rather inconspicuously so. Other distinguishing characters as stated in key. The chaetotaxy of the legs is similar to that of the last species, but the bristles are longer and stronger, and those on antero-ventral surface of hind femur are more numerous, forming an almost complete, if sparse, series. The frons is about as wide as length of antenna, while in *semifumosa* it is distinctly narrower; lower and anterior sterno-pleural bristles much shorter than upper.

Length 4–5 mm.

Type, male, allotype, and two male paratypes, Ulundi, Natal, ix. 1896, 5000–6500 feet (*G. A. K. Marshall*). One female paratype, Willow Grange, Natal (*R. C. Wroughton*).

Caricea tripunctiventris, sp. n.

Male.—A smaller species than either of the preceding two, with hyaline wings, the fore tibia not pale yellow at base, the abdomen almost cylindrical and with paired spots and a fuscous median vitta on dorsum black. The arista has shorter hairs than in the last species, the antennæ extend farther towards mouth-margin, the third segment is slightly pointed at apex above. In other respects the head is similar to that of *semialba*. The hypopygium is larger than in that species, being slightly knob-like, the abdomen is not compressed, and the outer cross-vein of wings is about one-third from apex of discal cell, which is much closer to apex than in *semialba*.

Length 3.5 mm.

Type, Mt. Mlanje, Nyasaland, 16. vi. 1913 (*S. A. Neave*).

A female which is marked, as is the male, may probably represent another species. The arista has longer hairs, the sterno-pleural bristles are all long and strong, and the inner cross-vein is but little beyond middle of discal cell, while the outer one is even farther from apex of fifth vein than in *semialba*.

Locality, Durban, Natal (*F. Muir*).

Caricea longiseta (Stein).

Differs from all the preceding species in having the femora and tibiæ yellow, only the extreme apices of the hind femora being black, and the coxæ are yellow. The antennæ are black, and palpi yellow. Thorax indistinctly vittate. Abdomen marked with a series of central spots and paired lateral spots black. Longest hairs on arista about as long as third antennal segment. Anterior sterno-pleural bristle long and strong; median fore tibial bristle very long, median hind tibial bristles very long and transversely placed.

One male from Sierra Leone differs in having the apex of third antennal segment and all of fore coxæ except extreme bases yellow.

Length 5 mm.

I have before me a series of specimens from Ashanti, Sierra Leone, Southern Nigeria, Uganda, Northern Nyasa, and Durban, Natal.

Caricea fumipennis (Stein).

Differs from *atroapicata* in having the median bristle on hind tibia slightly apicad of the antero-dorsal one. Legs with the exception of the trochanters, basal half of mid and hind femora, and the extreme bases of tibiæ black. The wings are rather noticeably browned. Abdomen with a large fuscous mark on each tergite which covers the entire posterior dorsal margin and extends to anterior margin in centre more or less broadly. The fore femora are less setulose antero-ventrally than in *atroapicata*.

Length 6 mm.

One female, north of Mt. Kenya, Kenya Colony, 18. ii. 1911, 8300 feet (*T. J. Anderson*).

As the thorax is vittate, it is almost impossible to locate this species correctly by using Stein's key to the African species (1913).

Caricea vittata (Wiedemann).

This species differs in the colour of the face in the sexes, the female having it whitish-grey and the male almost golden-yellow. The femora are without black marks, except at extreme apices of the hind pair. The difference in chaetotaxy of the hind tibiæ in the sexes is very remarkable, the lack of the antero-ventral bristle in male when it is present in female being unique in my experience, and it may not apply to the following species, though I have listed them that way in the key.

Length 4-5 mm.

Localities, four specimens, Ulundi, Natal, ix. 1896, 5000-6500 feet, and two specimens, Estcourt, Natal, ix.-x. 1896 (*G. A. K. Marshall*); one specimen, Willow Grange, Natal (*R. C. Wroughton*).

This and the next species may be referred, with a slight doubt, to my genus *Neodexiopsis*.

Caricea fuscifemur, sp. n.

Female.—Very closely related to *vittata*. Differs in having the femora largely fuscous, the abdominal spots larger and darker, a more conspicuous dark area on mesopleura, the lower calyptra larger, the outer cross-vein at about its own length from apex of fifth instead of half that length, as well as stated in key.

Length 5 mm.

Type, Embu, Kenya Colony, 20. ii. 1914 (*G. St. Orde Browne*).

Caricea attenuicornis, sp. n.

Female.—Dorsum including frons chocolate-brown, the frons opaque, thorax and abdomen shining, the former slightly so; face, pleura, and lateral margins of abdominal tergites whitish pruinulent, that on tergites extending towards the middle on the anterior margins, but not entirely over dorsum. Antennæ black, palpi fuscous. Legs yellow; mid and hind coxæ, a streak along dorsal surfaces of fore femora, and the apices of mid and hind femora infuscated.

Eyes covering almost the entire side of head, facets much enlarged in middle close to face; frons flat, bristles rubbed off in type; antennæ long and slender, inserted above middle of profile, third segment tapered to apex, tip acute; arista with its longest hairs as long as its basal width; parafacial and cheek linear. Anterior and lower sterno-pleural bristles short, a long setulose hair between upper and lower bristles as in some of the other species. Tibial bristles very long, the pair on hind tibia at middle transverse. Inner cross-vein at middle of discal cell, outer one a little more than its own length from apex of fifth vein.

Length 6 mm.

Type, South-east edge of Kenya Forest, Kenya Colony, 7. ii. 1911, 5000–6000 feet (*T. J. Anderson*).

Caricea inequivitta, sp. n.

Male and female.—Black, densely yellowish-grey pruinulent. Head black, orbits grey; antennæ black; palpi dark brown. Thorax with a linear median vitta and a very broad one on each side of it dark brown, the vittæ nowhere confluent, the lateral pair continued over anterior lateral angles of scutellum; mesopleura brown above. Abdomen with median and lateral brown spots on dorsum. Legs yellow, fore femora almost entirely, mid and hind pairs dorsally and apically blackened; tarsi brown.

Longest hairs on arista about as long as width of third antennal segment. Anterior sterno-pleural bristle very short and weak; basal pair of marginal scutellar bristles much shorter than the apical pair. Abdomen of male cylindrical, the hypopygium small, fourth sternite with two or three long hairs apically, processes of fifth sternite with

fine short hairs and some longer setulæ; abdomen of female tapered apically, apical tergite with very short bristles. Tibial bristles long; anterior and antero-dorsal pair not at same height, the former apicad slightly. Fourth wing-vein in male conspicuously thickened proximad of the inner cross-vein to base of discal cell, not abnormal in female; inner cross-vein at or slightly before middle of discal cell.

Length 7 mm.

Type, female, allotype, and four paratypes, Nakuni, Kenya Colony, i. 1913 (*B. L. van Someren*). Paratypes, two females, Mogorr River, Kenya Col., v. 1913 (*Capt. A. O. Luckman*); one female, Kabete, Kenya Col., 17. ii. 1918, and one female, west of Mt. Kenia, 19-20. ii. 1911, 6500-7250 feet (*T. J. Anderson*).

Cænosiæ xenia, sp. n.

Male.—An aberrant species, distinguished by the absence of the anterior bristle from middle of hind tibia.

Black, densely grey-pruinose. Head black, frons almost velvety, deep black, orbits grey; antennæ and palpi black. Thorax greasy in type, but evidently vittate. Abdomen with large but not clearly defined lateral spots and median vitta on dorsum black. Legs including fore coxæ yellow, fore femora with a black streak on apical half above, mid and hind femora with about the apical third black; tarsi fuscous. Wings hyaline.

Frons nearly one-third of the head-width; antennæ falling considerably short of the mouth-margin, third segment acute above at apex; arista very short pubescent. Abdomen compressed, hypopygium small, fifth sternite with inner half of each process shining and furnished with long fine hairs; fore and mid tibia with the normal bristles small; hind femur with long fine hairs on basal half of postero-ventral surface, and two or three short, widely separated bristles on antero-ventral surface; hind tibia with a short antero-dorsal bristle at middle. Inner cross-vein just beyond middle of discal cell, outer at its own length from apex of fifth vein.

Length 5 mm.

Type, Ulundi, Natal, ix. 1896, 5000-6500 feet (*G. A. K. Marshall*).

Caricea natalia, sp. n.

Female.—Similar in colour and habitus to *atropicata*, differing as stated in key.

The longest hairs on arista are distinctly longer than its basal diameter, the third antennal segment is produced into a sharp point at apex above, and falls short of mouth-margin by a distance about equal to its width; there is a strong bristle above the vibrissa; all the sterno-pleurals are strong, and the median pair of bristles on hind tibia are transversely placed.

Length 7 mm.

Type, Willow Grange, Natal (*R. C. Wroughton*).

Caricea calopoda (Bezzi).

A very striking species. Fore femur with a long dorsal stripe, and mid and hind femora with a dorsal stripe on apical third or more fuscous; tarsi fuscous. Thorax with three almost confluent dark brown vittæ, and a series of elongate brown spots at bases of dorso-centrals, the median vitta extending to anterior margin and over disc of scutellum; abdomen with a series of elongate dorso-central spots and lateral spots on each segment dark brown. Arista very short-haired; anterior sterno-pleural bristle very weak and short; basal sternite bare; basal half of antero-ventral and ventral surfaces of fore femora rather conspicuously setulose.

Length 7 mm.

I have before me two females from the edge of the forest on the east side of the Aberdare Mts., Kenya Colony, 24. ii. 1911, 7300 feet (*T. J. Anderson*).

Caricea atroapicata, sp. n.

Male and female.—Similar to the preceding species in general colour, the antennæ black, palpi fuscous basally, blackened apically. The thoracic vittæ are similar, but the median one is not carried over disc of scutellum. The fore femur has the black dorsal stripe broader and present only on the apical half. The median bristles on hind tibiæ are closer together than in *calopoda*, the anterior one being but little basad of the antero-dorsal one, while in *calopoda* it is very distinctly so. The fore and hind tibiæ are also more distinctly hairy. The male has one or two very fine outstanding hairs near apices of basal two segments of hind tarsi on anterior side. Hypopygium small; fifth sternite with rather dense short hairs along margins of processes.

Length 6 mm.

Type, male, Kondoa Itangi, Tanganyika Territory, 12. vi. 1916, 4400 feet (*W. A. Lamborn*). Allotype, Ufomi, Tanganyika Terr., 6. vi. 1916. One male paratype, same data as allotype (*W. A. Lamborn*).

Caricea longitarsis (Stein).

One female I identify as this from Port Natal.

Caricea strigulipes (Stein).

Two males and one female, Port Natal (*Plant*).

Cænosiæ acuticoruis (Stein).

A typical *Cænosiæ*, belonging to the same group as most of the European and North American species. Very well distinguished by the fusion of the three brown thoracic vittæ into a broad stripe, which extends over disc of scutellum. Abdomen with paired dark spots; tibiæ tawny; antennæ and palpi black.

Originally described from Victoria. I have before me a series from Burpentry, Queensland, and Tasmania.

LXI.—*Fishes of the Clupeid Genera Clupeoides and Potamalosa, and allied Genera.* By C. TATE REGAN, M.A., F.R.S.

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In former papers on the Clupeidæ I have revised most of the fishes included by Günther in the genera *Clupea*, *Chatoessus*, and *Pellonula*. The remaining Clupeinæ are here dealt with, except the genera with a long anal fin.

Synopsis of the Genera.

A single supramaxillary (supplemental bone).

I. No mid-dorsal series of scutes.

A. Anal fin without finlets.

Abdominal serrature beginning at isthmus 1. *Kowala*.
Abdominal serrature beginning behind thorax 2. *Clupeoides*.

B. Anal fin followed by two finlets.

Mouth normal; teeth minute 3. *Corica*.
Dentigerous edge of maxillary extending nearly to
premaxillary; teeth acute, unequal 4. *Clupeichthys*.

II. A series of keeled scutes from occiput to dorsal fin.

Teeth small; supramaxillary (supplemental bone)
narrow 5. *Potamalosa*.
No distinct teeth; supramaxillary broad 6. *Hyperlophus*.